

CLAIMS

1. A method of copy protecting an optical disc carrying encoded data, control data, and an authenticating signature, the encoded data, control data and the authenticating signature having been applied to the disc during a mastering process, and the method of copy protecting the optical disc comprising the steps of making up the authenticating signature from data patterns such that the authenticating signature cannot be accurately written onto a copy disc by a writer for recordable discs.  
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2. A method according to Claim 1, wherein the existence of corrupted or otherwise incorrect data in a particular sector on the optical disc is to be used to signify that that disc is not original whereby its use may be prevented.
- 15 3. A method according to Claim 1, wherein successful operation of the copy protected disc requires that the disc be present in the drive and that a correct signature be readable therefrom.
- 20 4. A method according to Claim 1, wherein the data patterns of the authenticating signature are chosen to cause DSV problems for CD writers.
5. A method according to Claim 4, wherein the data patterns are chosen to ensure that the DSV has a significant absolute value.
- 25 6. A method according to Claim 4, wherein the data patterns which are chosen to cause DSV problems are repeated patterns of values.
7. A method according to Claim 4, wherein the size of the data patterns causing the DSV problems is a predetermined amount.  
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8. A method according to Claim 4, wherein the data patterns which are chosen to cause DSV problems are arranged to have a DSV which has a rapid rate of change.

9. A method according to Claim 4, wherein data patterns which are chosen to cause DSV problems are arranged to produce a DSV which has a substantial low frequency component.

5 10. A method according to Claim 1 or Claim 4, wherein the authenticating signature is also made up of sectors containing only zeros which are provided both before and after sectors containing the chosen data patterns.

10 11. A copy protected optical disc carrying encoded data, control data, and an authenticating signature which were applied to the disc during mastering, wherein the authenticating signature is made up of data patterns arranged such that the signature cannot generally be accurately written onto a copy disc by a writer for recordable discs.

15 12. A copy protected optical disc according to Claim 11, wherein the data patterns of the authenticating signature have a size and/or a nature which ensures that they cannot be accurately written by a CD writer.

20 13. A copy protected optical disc according to Claim 11, wherein said data patterns have been chosen to cause DSV problems for CD writers.

14. A copy protected optical disc according to Claim 13, wherein the data patterns are chosen to ensure that the DSV has a significant absolute value.

25 15. A copy protected optical disc according to Claim 13, wherein the data patterns which are chosen to cause DSV problems are repeated patterns of values.

30 16. A copy protected optical disc according to Claim 13, wherein the size of the data patterns causing the DSV problems may be a predetermined amount.

17. A copy protected optical disc according to Claim 13, wherein the data patterns which are chosen to cause DSV problems are arranged to have a DSV which has a rapid rate of change.

18. A copy protected optical disc according to Claim 13, wherein the data patterns which are chosen to cause DSV problems are arranged to produce a DSV which has a substantial low frequency component.
- 5 19. A copy protected optical disc according to Claim 13, wherein the chosen data patterns have been copied to a plurality of sectors on the optical disc.
- 10 20. A method of authenticating a copy protected optical disc carrying encoded data, control data, and an authenticating signature, the encoded data, control data and the authenticating signature having been applied to the disc during a mastering process wherein the authenticating signature is made up of data patterns arranged such that the signature cannot generally be accurately written onto a copy disc by a writer for recordable discs, and the method comprising the step of requiring a disc drive to locate and accurately read the authenticating signature on the disc in order to enable operation of the copy protected disc.
- 15 21. A method of authenticating a copy protected optical disc according to Claim 20, wherein the authenticating signature on the copy protected disc is of data patterns chosen to cause DSV problems.
- 20 22. A method of enabling the mastering of an optical disc by an enabled encoder, where a recordable disc, from which a drive associated with the encoder is to read data during the mastering process, carries a blocking file made up of data patterns which cannot generally be accurately read by a disc drive, the method comprising the step of providing on the recordable disc information as to the existence and location of the blocking file, the drive associated with the encoder being arranged not to read the blocking file in response to said existence and location information.
- 30 23. A recordable disc for use in a process for mastering optical discs, wherein the recordable disc carries the data to be carried on the optical discs, wherein the recordable disc carries a blocking file made up of data patterns added to a recordable disc during the authoring or premastering process, and wherein the data patterns cannot generally be accurately read by a disc drive.
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24. A recordable disc for use in a process for mastering optical discs according to Claim 23, wherein the data patterns of the blocking file are chosen to cause DSV problems.

5 25. A recordable disc according to Claim 24, wherein the data patterns have a DSV which has a significant absolute value.

26. A recordable disc according to Claim 24, wherein the data patterns which are chosen to cause DSV problems are repeated patterns of values.

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27. A recordable disc according to Claim 24, wherein the size of the data patterns producing the required DSV may be a predetermined amount.

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28. A recordable disc according to Claim 24, wherein the data patterns which are chosen to cause DSV problems are arranged to have a DSV which has a rapid rate of change.

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29. A recordable disc according to Claim 24, wherein the data patterns which are chosen to cause DSV problems are arranged to produce a DSV which has a substantial low frequency component.

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